	Work Order ID 106656 September-11-13 11:12:49 AM stem ID: 646.3714 6 46		1 <u>4</u>	*106	3656*							Page 1	
Item ID: Revision ID: Item Name:	646.3714 Gusset	646. B100	3714 3656	Accept	*N900	040	100)*	Setup	Start Stop	*N *N	S1* S2*	
Start Date: Required Date Reference:	9/23/13 e: 9/23/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		Cust Item Customer:	ID:							
Approvals:	Process Pla	in: MCJ	Date: \3-09-	12 Tooling:	D	ate:				Start	*N	R1*	
			Date:	SPC (Y/N):	D	ate:				Stop	*N	R2*	
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje		Reject Number	Insp. Stamp	<u>:</u>
Draw Nbr	Rev	ision Nbr											
646.3700	A'											1	
110		· - -		0.00					· · · · · ·			-	
110 Waterjet FLOW CNC Wate	ariot	Memo 1-Cut as pe	er Dwa	0.00				_8_				Jm13-10	-06
TEOW CIVE Wate	rijet	Dwg Rev:_ Prog Rev:_	4										
		2-Deburr if	necessary						*				
120		QC2- Inspect parts off	nachine FAI/FAIB	0.00	·			4.					
1:20		222 mapoor harts our r		0.00				8	۵			JM13-10	ዕፈረ
QC		Мето		0.00		•						<u> </u>	

Memo

											DQA.	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORM	MANCE / UP[DATE	OA Classid	D-4	
					 			r		-	QA Closed:	Date	
Work Orde	er:					DISPOSITION				AGAINST DI	EPARTMENT	/PROCESS	
Part i	- . No.					Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
								<u> </u>			-		
Root						ption of work order update	1	Initial	Act		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Cł	nief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling													
Operator													
Material													
Setup												ļ	
Other													
Process	П												
Supplier			1										
Training													
Unapproved			ŀ				Ì]	
				1			FAU	LT CATE	GORY		<u>'</u>		<u> </u>
Landi	ng (Gear				General							
		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre N	ot Conce	ntric to (o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	· · · · · · · · · · · · · · · · · · ·	Weld
		Crushed/	Crimped			Burrs		-	ions Incomplete/U	Jnclear	Part Lost/M		Wrong Stock Pulled
		Cuffs	•			Contamination		Mainte	•		Part Moved	· L	
1		Heat Trea	at			Countersink	\vdash	Mislabe			Positioned \	Vrong	
		Inspectio		Tube		Cut Too Short		Misread			Power Loss,	· ·	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde September-11-1.				*106	3656*						Page 2
Item ID: Revision ID: Item Name: Start Date: Required Date:	646.3714 Gusset 9/23/13 9/23/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		*N900 Cust Item Customer:	ID:	ገበ*	Setup	Start Stop		S1* S2*
Reference:			Ω						_		
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		ate:			Start Stop		२1* २2*
Sequence ID/ Work Center II 130 *130* QC Quality Control	D	Operation Description QC8- Inspect parts - second	and check	Set Up/ Run Hours 0.00 27 9-89 0.00 3	Tool ID	Tool # Pla Co		t Reje Qty		Reject Number	Insp. Stamp
140 *140 Brake NC ** ** ** ** ** ** ** ** **		Bend as per dwg Memo		0.00			\$		-		SB (3/10/
150 *150 QC		QC5- Inspect part compl	eteness to step on W/G	DAS 27 0.00 9-89 0.00 13 10	9		8				

												DQA:	Da	ite:	
NCR:	/es	/ No				WORK ORDER NON-C	O	NFORM	/IANCE / UP	DATE		•			· .
											_	QA Closed:	Da	ite:	
Work Orde	or.					DISPOSITION		:		AGAINST DE	ΞP.	ARTMENT	PROCESS		
Work Oral	-''-					Rework	1		Skid-tube	Crosstube	7		Water Jet		Engineering
Part i	۱o.					Scrap	1	l .	Machining	Small Fab	1	Proc	d. Eng. Coor.	1	Quality
	•					Use-as-is	1	Therm	noforming	Finishing	1	Rec/Stor	e/Packaging		Other
NCR I	۷o.					Work Order Update]		Large Fab	Composite]		Supplier		
											_				
Root						ption of work order update	1	nitial		tion		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	+	Date	Verificatio	<u>n</u>	QC Inspector
Doc/Data											ı				
Equip/Tooling	Щ						1				1				
Operator	Щ		İ								1				
Material	Ш						Ì				1				
Setup	Щ							:			1				
Other	Ш			į			l				1				
Process											-				
Supplier												•			
Training	Ш														
Unapproved			<u> </u>				1_				丄				
							AUI	T CATE	GORY		_				
Landi	ng (1			_	General	_	1		_	_				7
		Bending			ļ	Bend		Grain			┥.	Ovalized		\vdash	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		ا_	Over/Under	tolerance	L	Temperature/Cure
		Cracks			L	Broken/Damaged	L	4	on Incomplete			Part Incorred			Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/	'Unclear	ا_	Part Lost/Mi	ssing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		_ '	Part Moved			
		Heat Trea	at			Countersink		Mislabe	eled		_](Positioned V	Vrong	_	_
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	ł			Power Loss/	Surge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord September-11-1				*106	6656*				Page 3
Item ID: Revision ID: Item Name:	646.3714 Gusset			Accept	*N900	04010)* Setu	p Start Stop	*NS1* *NS2*
Start Date: Required Date Reference:	9/23/13 :: 9/23/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		Cust Item I Customer:	D:			
Approvals:			Date:	Tooling: SPC (Y/N):		ate:	Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 160 *160* Outsource4 Outsource process		1- Black Anodi: 2- PRIME AS F	rG: <u>Q174</u> 3 ze as per Dwg 646.3700 PER DWG, SEE NOTE # Comformity is required	Set Up/ Run Hours 0.00 0.00	Tool ID	Tool # Plan Code	Qty Q		Reject Insp. Number Stamp
170 Packaging Packaging		Memo		0.00				<u> </u>	• (8)
180 *1 2 1 *1		QC5- Inspect part completed Memo	ness to step on W/O	0.00	SM)		8		

											DQA:	Dat	e:	
NCR: Y	'es	/ No				WORK ORDER NON-O	COI	VFOR	MANCE / UPDATE					•
		<u>-</u>								_	QA Closed:	Dat	e:	
Work Orde	ıř.					DISPOSITION			AGAIN	IST DE	PARTMENT	/PROCESS		
Work Orde						Rework]		Skid-tube Crosstu	ıbe]	Water Jet		Engineering
Part N	۱o.					Scrap]		Machining Small F	ab	Pro	d. Eng. Coor.		Quality
	_					Use-as-is		Thern	noforming Finish		Rec/Sto	re/Packaging		Other
NCR N	١o.					Work Order Update]		Large Fab Compos	site]	Supplier		
Root			[Descri	ption of work order update		Initial	Action		Sign &		Т	
Cause		Date	Step	Qty		or Non-conformance	1	nief Eng	Description		Date	Verification	,	QC Inspector
Doc/Data		Date	Step	αι,	`	or ron comormance	 	ner eng	<i>Description</i>	-	Jute			Qo mapesto.
Equip/Tooling													1	
Operator														
Material														
Setup														
Other				İ										
Process					İ									
Supplier														
Training														
Unapproved				<u> </u>			<u> </u>				ļ <u></u>			
						F	AUI	LT CATE	GORY					
Landi	ng (ear				General	_	,			- 1	-		
		Bending			_	Bend		Grain			Ovalized].	-	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	- F		Temperature/Cure
	-	Cracks				Broken/Damaged	<u></u>	- 1 `	ion Incomplete	<u> </u>	Part Incorre	}	_	Weld
	L	Crushed/	Crimped		<u> </u>	Burrs	<u></u>	-	ions Incomplete/Unclear		Part Lost/Mi	issing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance	<u> </u>	Part Moved			
1	1	Heat Trea	at		1	Countersink	1	Mislahe	eled	- 1	Positioned V	Vrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Work Ordenserver 11-1				*106	8656*						Page 4
Item ID: Revision ID: Item Name:	646.3714 Gusset			Accept	*N900	040	100)* :	Setup St	art * 	VS1* VS2*
Start Date: Required Date: Reference:	9/23/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*	·	Cust Item I Customer:	D:					
Approvals:	Process Pl	lan:	Date:			ite:]		art * ^{op} *	VR1* VR2*
Sequence ID/ Work Center II 210 *210*	D	Operation Description Identify as per dwg & Ste	ock Location: \$7.55	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Qty	Numbe	
Packaging Packaging		Memo ***IDENTII REV***	FY AS PER APICAL MI	PP-120 BY STAMPING TI	HE P# AND			/3-	-//	7	
*220 *220*		QC21- Final Inspection -	· Work Order Release	0.00			9	J/,	Rm 1	3/11/1	ſ
QC Quality Control		Memo		0.00			U			,	MF 13-11-

											DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UPD	DATE			•
											QA Closed:	Date	:
Work Orde	۰.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WORK OTHE	٠. ۔					Rework	1		Skid-tube	Crosstube]	Water Jet	Engineering
Part I	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•		*****			Use-as-is	1		noforming	Finishing	1	re/Packaging	Other
NCR I	No.					Work Order Update]		Large Fab	Composite		Supplier	
Root		:			Descri	ption of work order update	T	l Initial	Acti	ion	Sign &		1
Cause	ĺ	Date	Step	Qty	1	or Non-conformance		nief Eng	Descri		Date	Verification	QC Inspector
Doc/Data		· .	,										
Equip/Tooling													
Operator	П												
Material													
Setup													
Other													
Process													
Supplier				•			1						
Training							1						
Unapproved													
						F	AUI	LT CATE	GORY				
Landi	ing (Sear				General		7		_	7	r	7
	-	Bending			L	Bend		Grain		<u> </u>	Ovalized		Pressure/Forced
		Centre N	ot Conce	ntric to	O/S	BOM/Route	<u> </u>	Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		┥ `	ion Incomplete		Part Incorre	 	Weld
		Crushed/	Crimped			Burrs		-1	tions Incomplete/U	Inclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination	L	Mainte		<u> </u>	Part Moved		
	1	Heat Trea	at			Countersink		Mislabe	eled		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

· Picklist Print

September-11-13 11:12:49 AM

Work Order ID:

Parent Item Name:

106656

Parent Item:

646.3714

Gusset

Start Date: 9/23/13

Required Date: 9/23/13

Page 1

Start Qty: 8.00

Required Qty: 8.00

IPP REV-A 12 10 22 NEW ISSUE DD VERF-II M

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063 5061-T6 .063 Sheet		Purchased	No			110	sf	445.7105	0.265	2 .231579 2 2.5		Jmi?	5.10.0
				Location		Loc Qty	Lo	c Code					
				MAT021		445.7105							
				1231	135	120.2625							
				1240	003	72.113							
				M12	26075	253.335			Ω	075·			

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	/ANCE / UPI	DATE			_
											QA Closed:	Date:	
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I	•					Rework Scrap		ľ	Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR I	No.					Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	ooling or all services and services are services and services are services and services and services and services and services and services and services and services and services and serv												
							AUI	LT CATE	GORY				
Landi	ing (1				General		7_		·	.	_	-
		Bending Centre N Cracks Crushed/ Cuffs	'Crimped		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination		Instruct Mainte	on Incomplete ions Incomplete/U nance	Jnclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	\vdash	Heat Tre		T L	<u> </u>	Countersink	-	Mislabe		<u> </u>	Positioned \	_	7
	-	Inspection Ripples in		rube	-	Cut Too Short Drill Holes	\vdash	Misread Offset		L.	Power Loss/	ourge	Other

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

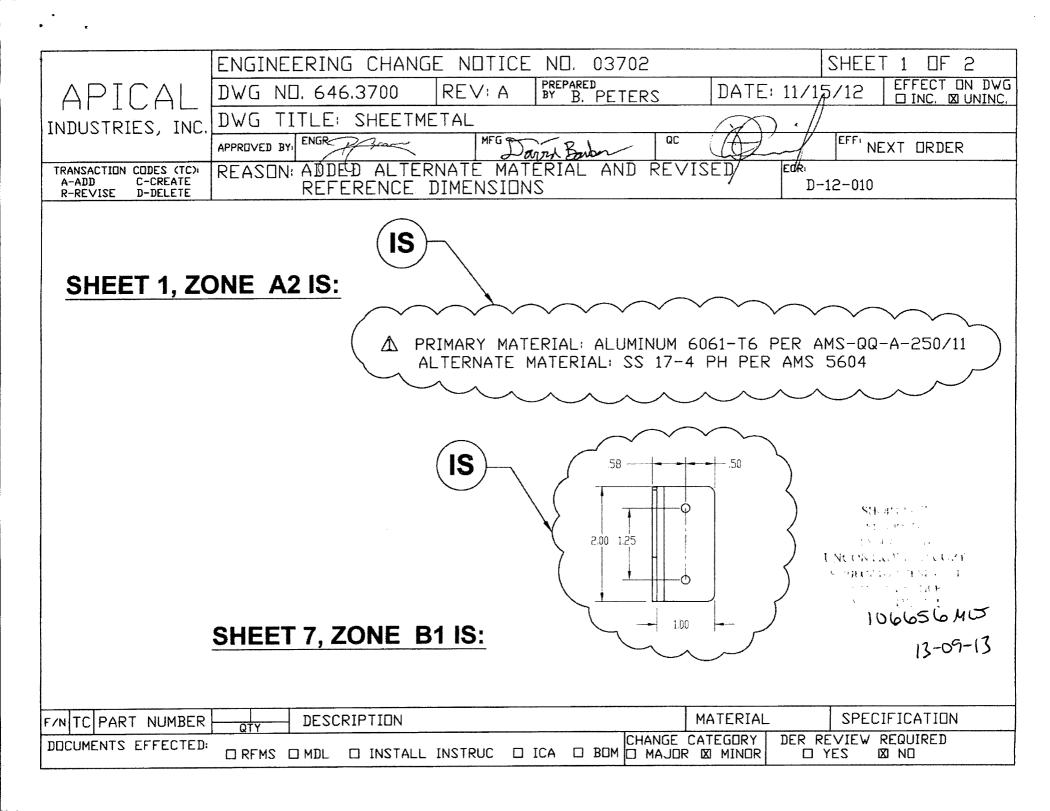
DART AEROSPACE LTD	Work Order:	106656
Description: Gusset	Part Number:	646.3714
Inspection Dwg: 646.3700 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.38" 6.50" 0.60" 3.13" 6.38" +.87238" 0.863	4-0.030"	1.38"	_		V	Jemos
6.50"	• •	6 30°	-		V	
0.60"	١,	0.60"			V	
3.18"	• •	3.15	_		V	
6.38"	• •	5.88	-		· V	
+.87238	*	2.38	_		V	
p. 863°	4-0000	0.061"	-		J	
	- TAMES - 1					
	.,					
			DAS			

Measured by: Jm	Audited by:	27 9- 89	Preliminary Approval:	
Date: 13-10-06	Date:	B. 108	Date:	

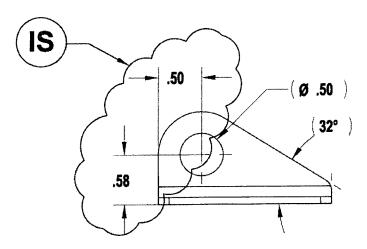
Rev	Date	Change	Revised by	Approved_
E	10.04.14	Added preliminary approval	KJ	



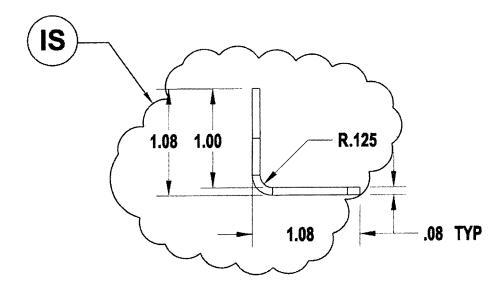
APICAL INDUSTRIES, INC.

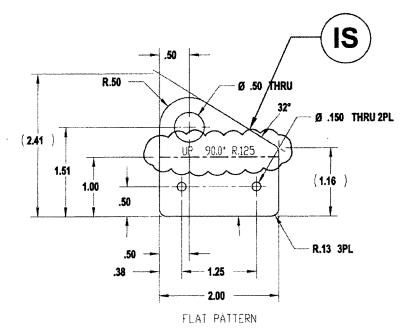
ENGINEERING CHANGE ORDER NO. 03702

SHEET 2 OF 2



SHEET 7, ZONE C4 IS:





SHEET 7, ZONE B7 IS:

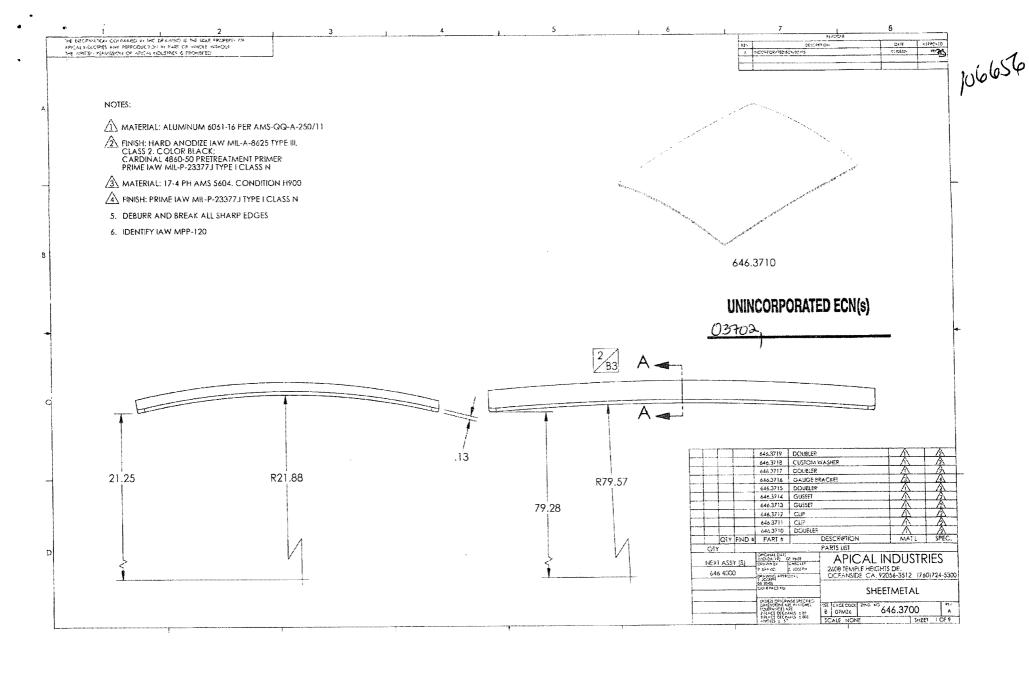
SHEET 7, ZONE D1 IS:

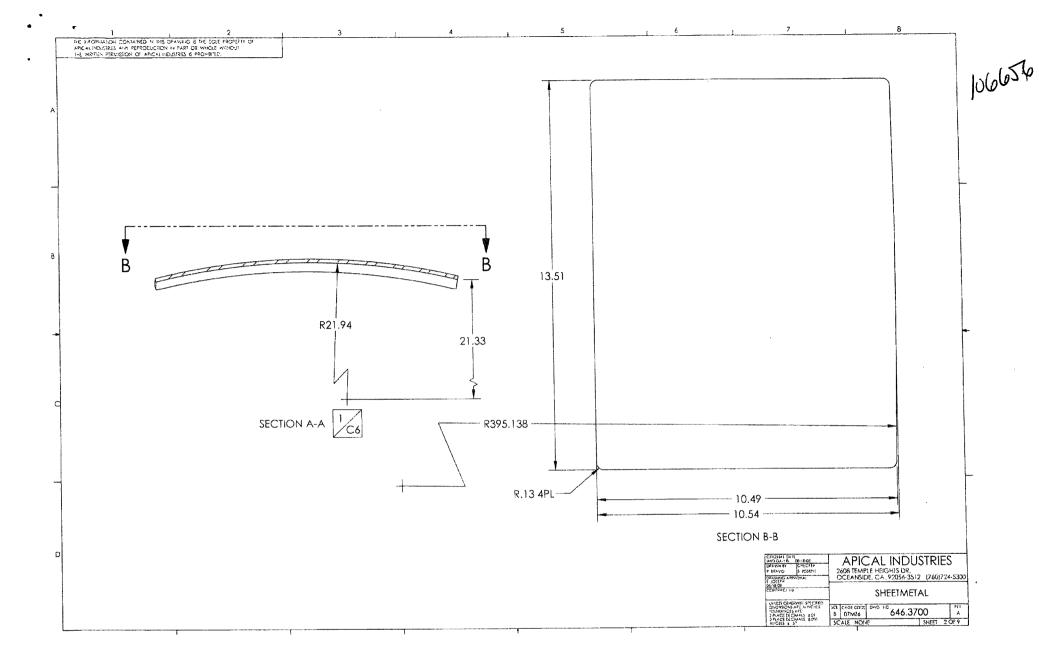
F/N TC PART NUMBER

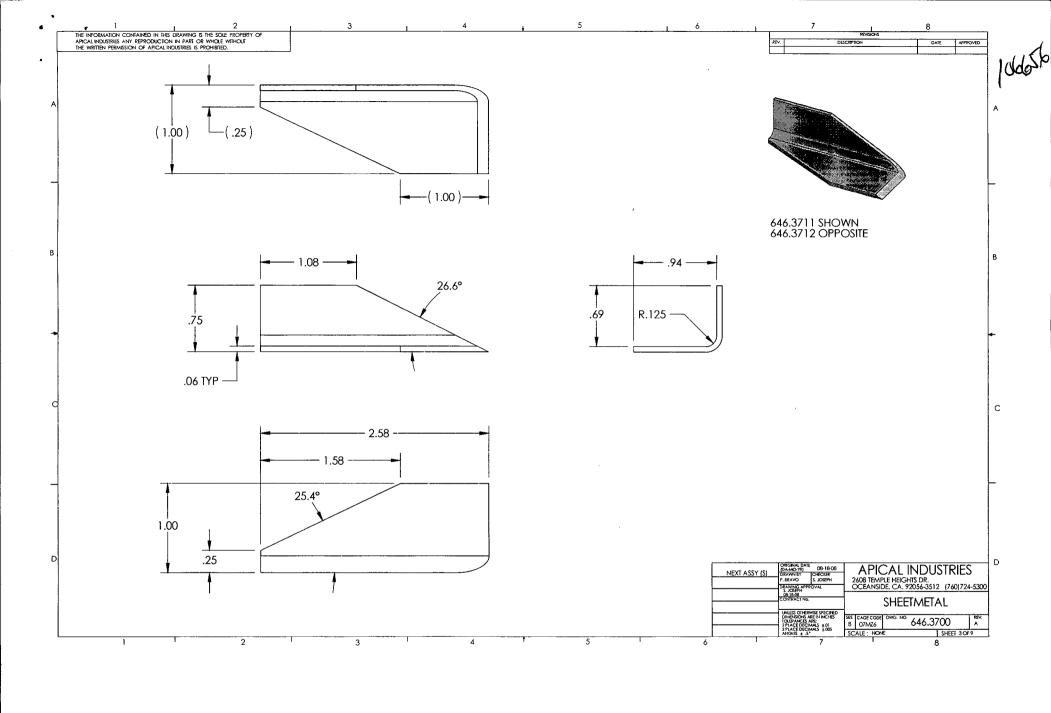
QTY

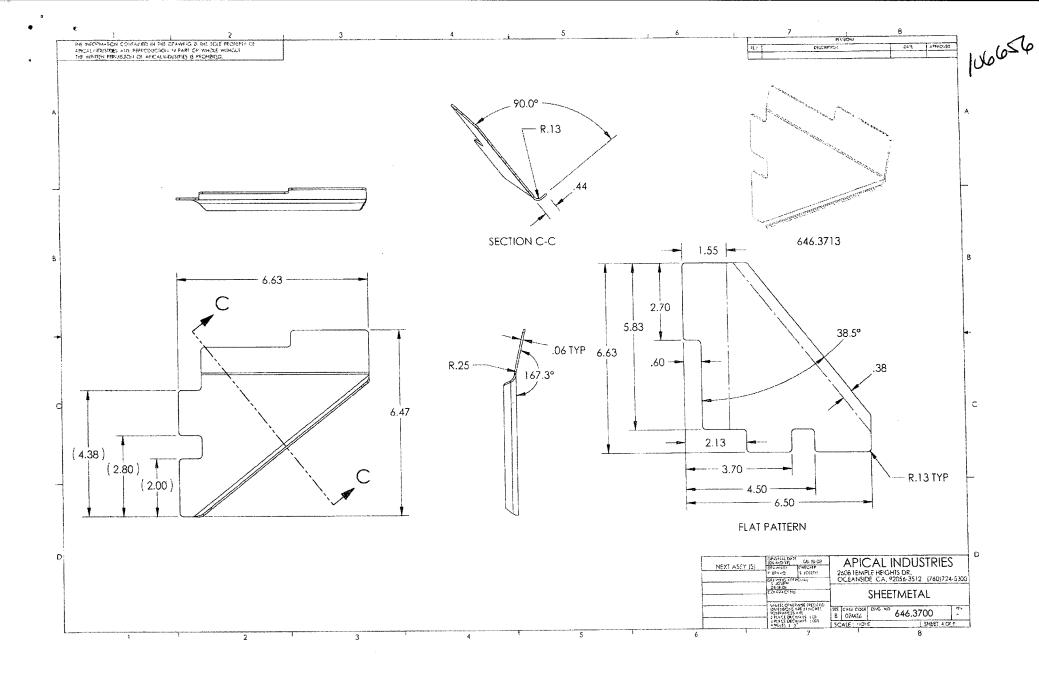
DESCRIPTION

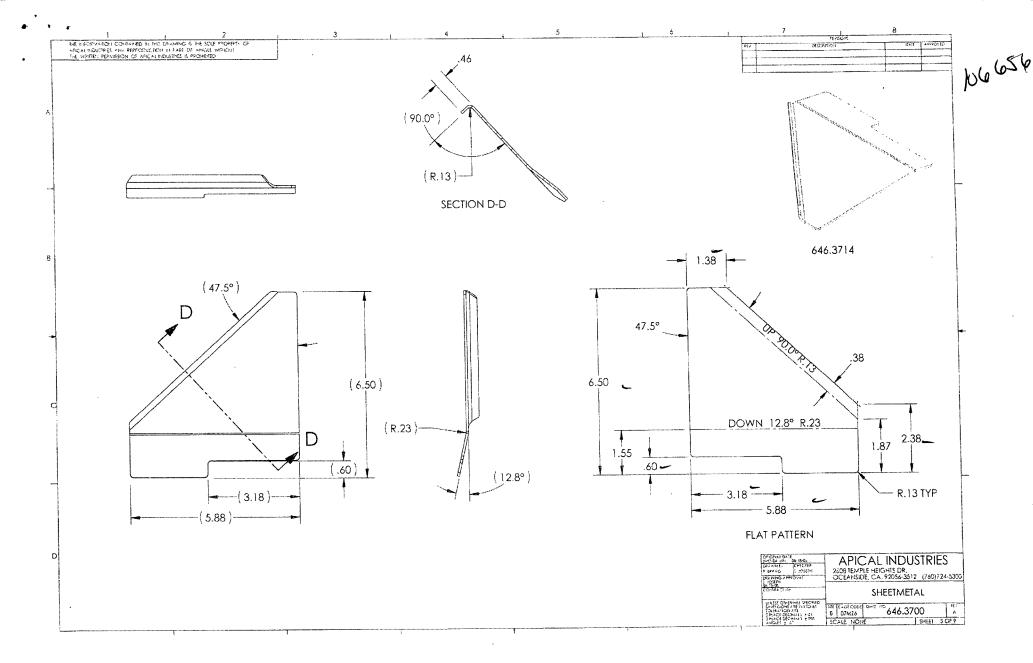
MATERIAL/SPECIFICATION

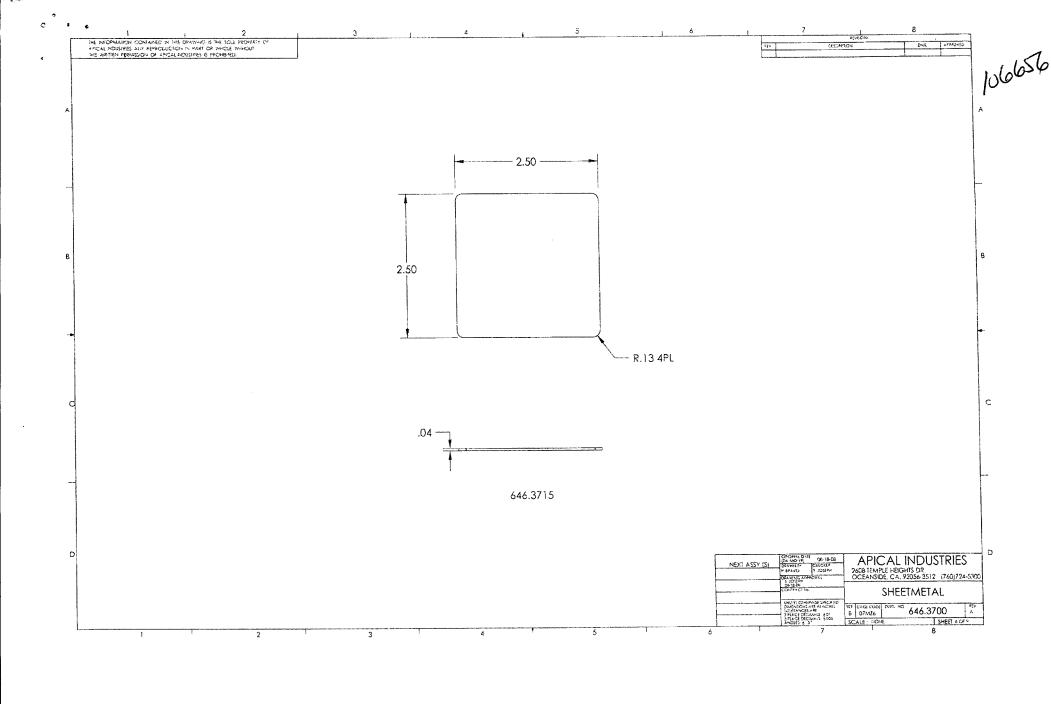


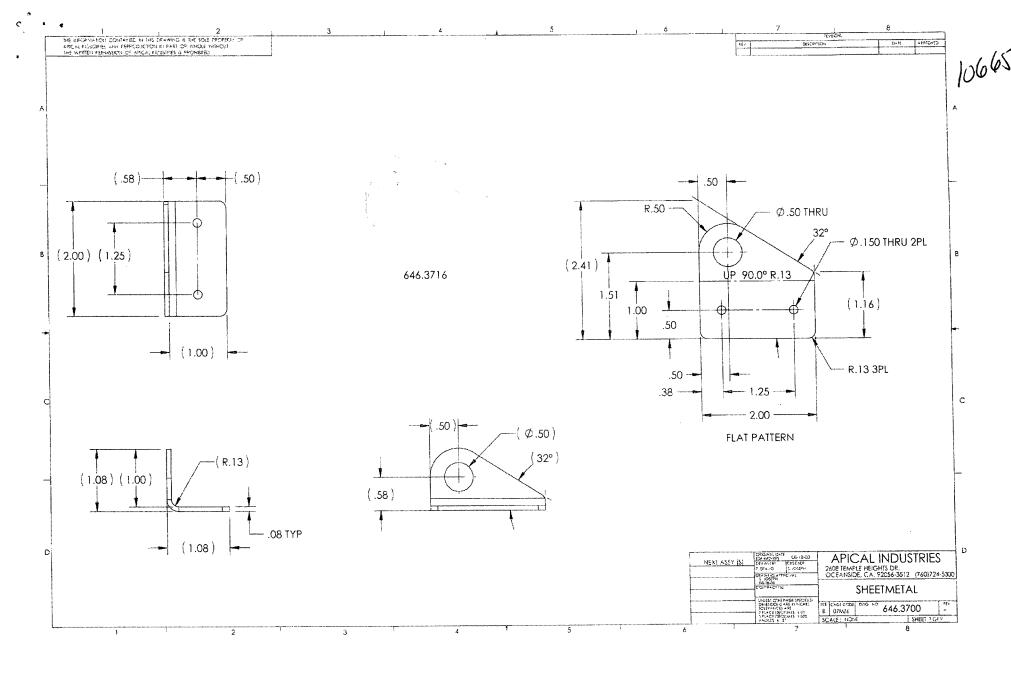




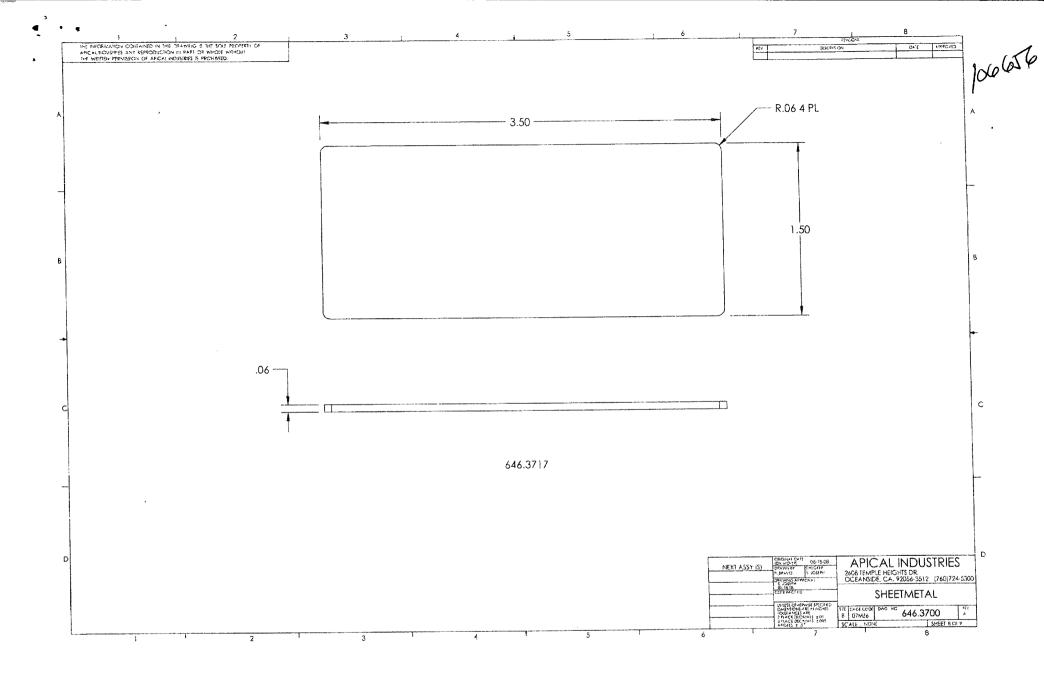


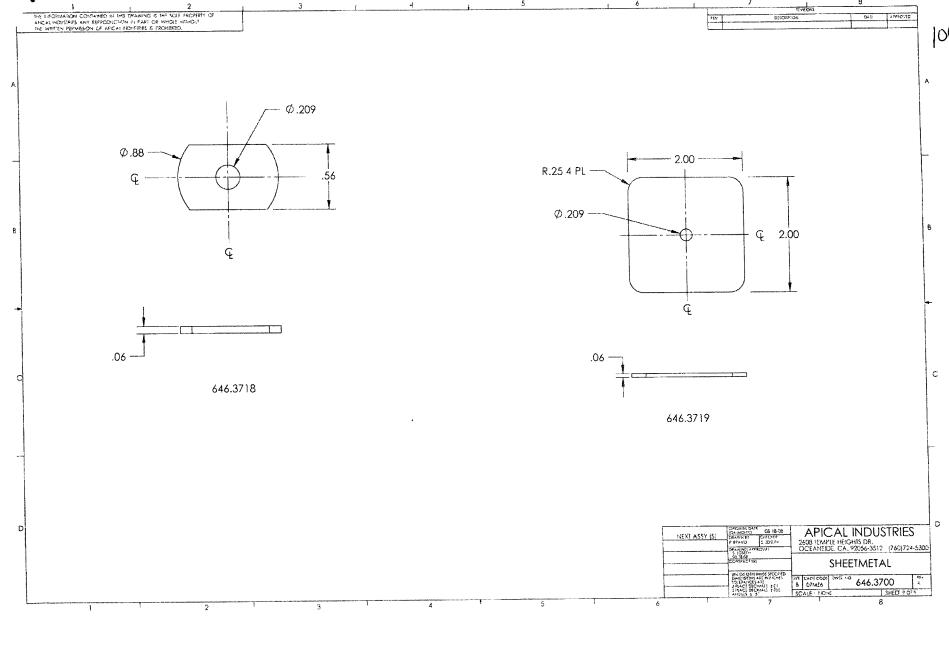






k.







A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

Pack List

Number: 62723

Date: 06-Nov-13

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via					
Quantity	Description						
1	Part: ASST	,	Rev:				
lot	9 PCS 41232-200-002-005 (1.25) (ALREADY SHIPPED 31/10/13)						
	BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2						
	5 PCS 646.3210 (12.20) 21 PCS 646.37 (4.15.75) \$ 3717 26 PCS 646.3810 (6.55) 18 PCS 646.3811 (6.55)	(8%)					
	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2						
	PRIME MIL-P-23377J TYPE I CLASS N						
	PRICE IS PER PIECE Job: 20130688	PO: 21743	Line:				
	Certificate of Con	formance					
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.							
	ISO 9001 : 2008 REG ATG SALES-2010 TE DATE : 6/1//3						
	CERTIFIED SIGNATURE :						
	RECEIVER SIGNATURE :						
		ì					